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ferential claim to the consideration of the Royal Astronomical Society, and I think I may safely add that it has an interest for many outside the Society, who are in the habit of using a telescope. As one standing near the threshold of the Temple of Science, but not, he fears, having in his possession the password which confers the privilege of entering and mingling with the votaries within, I am glad to find that the time has at last come when the judgment and influence of the Society are likely to be successfully employed in establishing such an observatory.

Of the want of a public observatory other than meridional, there cannot I think be a question. Col. Strange proclaims the want and points to the quarter from which support should come. It may be observed that whenever a new Ordnance map of these islands is declared upon authority to be wanted, theodolites and other instruments are very soon forthcoming for the work. And who will venture to say that England has spent so much money on theodolites and Armstrong guns that she cannot afford to set up a few equatoreals for the purpose of observing the satellites of *Jupiter* in order to construct new tables which would give to several pages of the *Nautical Almanac* a value which they do not now possess? Any idea of this kind is instantly put to flight by remembering the various liberal grants recently made by her Majesty's Treasury for the observation of the phenomena of solar eclipses, and the satisfactory provision made for the observation of the transit of *Venus* in 1874.

It is not pleasant then, to observe the rather desponding tone of this passage which I quote from the paper of the Astronomer Royal: "I see no prospect of obtaining a sufficient number of observations unless some observer would consent to give his entire observing energies to these observations."

Upon whom may I ask has fallen the mantle of the observer of *Gamma Virginis?*

Norwich, May, 1872.

On Astronomical Units. By C. C. De Crespigny.

In treatises on astronomical subjects I have observed that in English works, diameters and distances are expressed in British statute miles of 1760 yards each, in French works in kilometers, and I presume that in German and other works they are expressed in terms of the standard measure of length of the country in whose language the treatise may be written: also that in England we acknowledge another mile of 2026 yards, the sixtieth part of a degree of the equator, which, as it is also acknowledged in other countries, may be considered to have a greater right to be accounted a mile than the statute mile; at least when speaking on astronomical subjects. I have also read the remark in treatises above alluded to sometimes appended to a statement of the distance of a star

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from the Sun or of a planet from the Sun, that the human mind fails to form any appreciation of such an enormous distance. As it is one of the pleasing duties of any particular science to eliminate doubts and want of appreciation from the minds of students, and as it is difficult for students of one country to form a just appreciation of weights and measures when expressed in terms used in countries not their own, and as it would be generally desirable to have uniformity in expressions of astronomical distances as there already is in those of masses and densities, I venture to make the following suggestion in the hope it may be considered worthy of thought by some member of your Society. It is simply this, that ingenuous youth should first be taught the value of the 60th part of a degree and call that one mile. Then call the diameter of the Earth 6875 miles instead of 8000, as at present. From that point let his mind be led to contemplate the size of the Sun, the diameter of which he may be taught to express either in miles or in Earth's diameters. Then, instead of telling him that the Earth is 92 or 93 millions of miles (British) from the Sun, and at the same time stultifying him by saying that the mind fails, &c.; let him simply be taught that the Earth is *only* 100 of the Sun's diameters from that body, and his mind will at once appreciate the fact that the Earth is in reality very near the Sun, and he will be able to grasp with ease the distances of the exterior planets expressed in the same terms. He might for his own amusement reduce these distances to British miles, and it is to be hoped that the interests of the British inch would not be endangered by this method.

In the same manner distances of fixed stars, wherever determined, might be expressed in terms of the diameter or radius of the Earth's orbit.

Sarawak, February 1872.

The Astronomer Royal has received from Mr. Stone the following communication, dated Royal Observatory, Cape of Good Hope, 1872, April 18:—

"I have printed now 1856, 1857, and 1858, and have 1859 ready for press, and 1860 well in hands; but I hope also to bring out the results for 1871 this year."

A Paper by Mr Brett, "On an Altazimuth Mounting for Telescopes, especially adapted for the use of Observers who have no permanent Observatory," with an illustration, will appear in the next number of the *Monthly Notices*.

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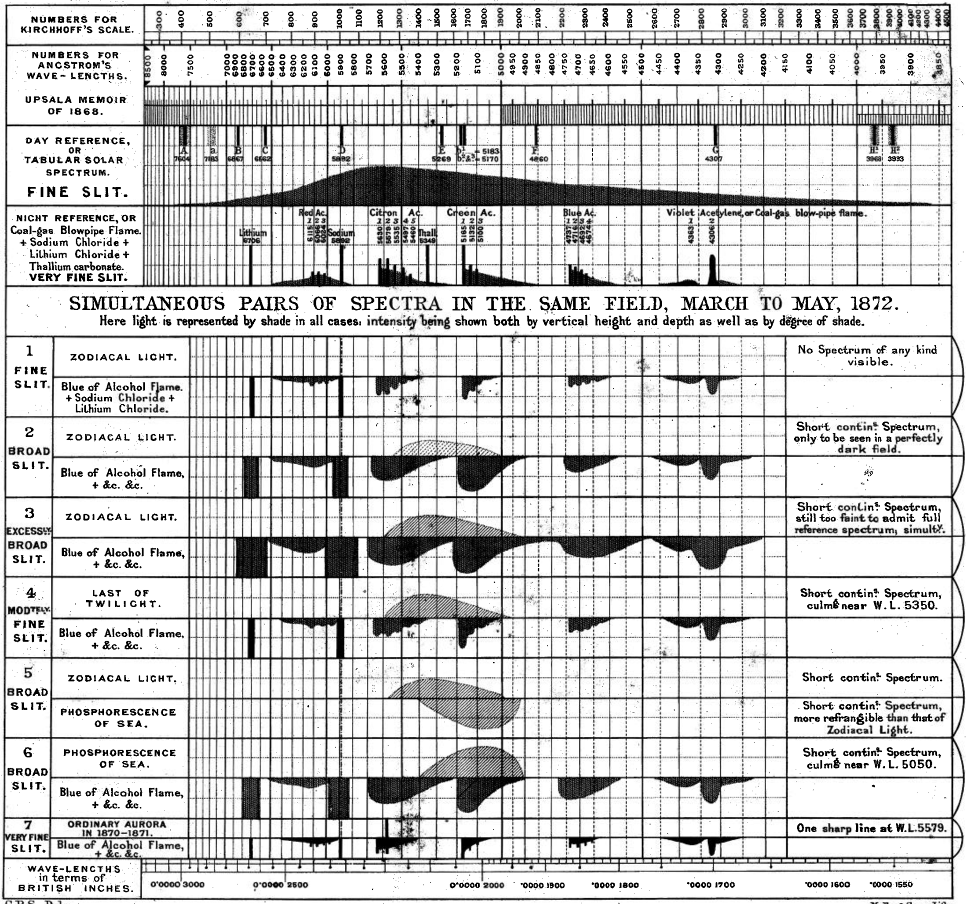
ZODIACAL LIGHT AND OTHER FAINT SPECTRA UNDER SMALL DISPERSION, SYMBOLICALLY REPRESENTED.

DAY AND NIGHT REFERENCE SPECTRA.

Ascending lines, in each horizontal partition, indicate light, intense according to height; descending lines indicate blackness; crossed lines, continuous spectra.



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